

## 10.0 510(k) Summary

This summary of 510(k) safety and effectiveness information is submitted in accordance with the requirements of the Safe Medical Devices Act of 1990 and 21 C.F.R. §807.92.

## 1. The submitter of this premarket notification is:

Egon Pfeil  
Regulatory Affairs  
Medical Products Group-Europe  
Hewlett-Packard GmbH  
Herrenberger Strasse 110-140  
D-71034  
Germany  
Tel: 011 49 (7031) 14-2243  
Fax: 011 49 (7031) 14-4297  
Email: egon\_pfeil@hp.com

This summary was prepared on April 27, 1999

## 2. The name of this device is the Hewlett-Packard family of Viridia Patient Monitors individually known as the M3000A/M3046A (Viridia M3/4). The common name is patient monitor. Classification names are as follows:

Regulation Number	Classification Name
870.1435	Computer, Diagnostic, Pre-Programmed, Single-Function
870.1025	Detector and Alarm, Arrhythmia
870.2900	Cable, Transducer and Electrode, Patient (including connector)

3. The modified device is substantially equivalent to previously cleared HP devices that contain the same STAR software and that are marketed pursuant to K964122, K971910, and K981576.
4. The modification consists of the addition of software that involves only the arrhythmia and ST measurement algorithm of the measurement computer processing unit of each device.
5. The new device has the same intended use as the legally marketed predicate devices. When used in the hospital environment or mobile environment for patient transport monitoring, the device is intended for measuring and displaying, recording and alarming multiple physiological parameters and waves in adult, pediatric, and neonatal patients.
6. The new combination device has the same technological characteristics as the legally marketed predicate devices.

7. Verification, validation, and testing activities were conducted to establish the performance and reliability characteristics of the STAR algorithm using bench studies. Testing involved system level tests, integration tests, safety testing from hazard analysis, interference testing, and hardware testing. Pass/Fail criteria were based on the specifications cleared for the predicate device and test results showed substantial equivalence.



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration  
9200 Corporate Boulevard  
Rockville MD 20850

JUN 7 1999

Mr. Egon Pfeil  
Hewlett-Packard GmbH  
Medical Products Group - Europe  
Herrenberger Strasse 110-140  
D-71034 Boeblingen  
GERMANY

Re: K991773  
Viridia HP M3000A/M3046A (M3/M4), Rel.B  
Portable Patient Monitor  
Regulatory Class: III (three)  
Product Code: 74 DSI  
Dated: May 10, 1999  
Received: May 25, 1999

Dear Mr. Pfeil:

We have reviewed your Section 510(k) notification of intent to market the device referenced above and we have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

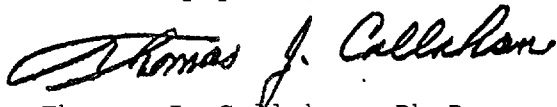
If your device is classified (see above) into either class II (Special Controls) or class III (Premarket Approval), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 895. A substantially equivalent determination assumes compliance with the Current Good Manufacturing Practice requirements, as set forth in the Quality System Regulation (QS) for Medical Devices: General regulation (21 CFR Part 820) and that, through periodic QS inspections, the Food and Drug Administration (FDA) will verify such assumptions. Failure to comply with the GMP regulation may result in regulatory action. In addition, FDA may publish further announcements concerning your device in the Federal Register. Please note: this response to your premarket notification submission does not affect any obligation you might have under sections 531 through 542 of the Act for devices under the Electronic Product Radiation Control provisions, or other Federal laws or regulations.

Page 2 - Mr. Egon Pfeil

This letter will allow you to begin marketing your device as described in your 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801 and additionally 809.10 for in vitro diagnostic devices), please contact the Office of Compliance at (301) 594-4648. Additionally, for questions on the promotion and advertising of your device, please contact the Office of Compliance at (301) 594-4639. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR 807.97). Other general information on your responsibilities under the Act may be obtained from the Division of Small Manufacturers Assistance at its toll-free number (800) 638-2041 or (301) 443-6597, or at its internet address "<http://www.fda.gov/cdrh/dsma/dsmamain.html>".

Sincerely yours,

A handwritten signature in black ink, reading "Thomas J. Callahan". The signature is fluid and cursive, with the first name "Thomas" being the most prominent.

Thomas J. Callahan, Ph.D.  
Director  
Division of Cardiovascular,  
Respiratory, and Neurological Devices  
Office of Device Evaluation  
Center for Devices and  
Radiological Health

Enclosure

3.1 ODE Indications Statement

**Indications for Use Statement**

510(k) Number  
(if known)

K991773

**Device Name**

The Hewlett-Packard Company (HP) Viridia  
M3000A/M3046A Patient Monitor Rev.B with ST/AR  
Software. Viridia HP M3000A/M3046A Patient  
Monitor Rel.B

**Indications for  
Use**

The Hewlett-Packard family of patient monitor  
products is intended for monitoring, recording,  
and alarming of multiple physiological  
parameters. The devices are indicated for use  
in health care facilities by health care  
professionals whenever there is a need for  
monitoring the physiological parameters of  
adult, neonatal, and pediatric patients.

PLEASE DO NOT WRITE BELOW THIS LINE - CONTINUE ON ANOTHER PAGE IF NEEDED

---

Concurrence of CDRH, Office of Device Evaluation (ODE)

*At H. A. C. L. L.*

Prescription Use   ✓    
(Per 21 CFR 801.109)

OR

Over-The-Counter Use